

REMARKS

Claims 67-74, 76-82, 84-117, and 119-127 are pending in the application.

Claims 67-74, 76-82, 84-117, and 119-127 have been rejected.

Claims 67, 68, 70, 73, 74, 76, 82, 84, 85, 103, 110, 111, 113, 116, 117, 119, 123, 125, and 126 have been amended.

Rejection of Claims Under 35 U.S.C. § 112

Claim 85 stands rejected under 35 U.S.C. § 112, second paragraph, as purportedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants traverse this rejection. The Office Action states that “it is unclear how the MAC device is sending data to itself.” Office Action, p. 2. Applicants submit that claim 85 does not recite a first MAC device operable to receive data from a first MAC device. Instead, claim 85 recites that a buffer coupled to the first MAC device is operable to receive data from the first MAC device. The claim requires that the buffer be coupled to the MAC device. The claim does not state that the buffer is the MAC device, or even that the buffer is a part of the MAC device. For at least these reasons, Applicants respectfully submit that the claim is not indefinite.

Rejection of Claims Under 35 U.S.C. § 103

Claims 67-74, 76-80, 84-85, 87-90, 92-117, 119-123 and 126-127 stand rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over U.S. Publication No. 2003/0076781 listing Enomoto et al. as inventors (“Enomoto”), in view of U.S. Patent No. 5,918,020 issued to Blackard et al. (“Blackard”). Applicants respectfully traverse these rejections.

In order for a claim to be rendered invalid under 35 U.S.C. § 103, the subject matter of the claim as a whole would have to be obvious to a person of ordinary skill in the art at the time the invention was made. *See* 35 U.S.C. § 103(a). This requires: (1) the reference(s) must teach or suggest all of the claim limitations; (2) there must be some teaching, suggestion or motivation to combine references either in the references

themselves or in the knowledge of the art; and (3) there must be a reasonable expectation of success. *See MPEP 2143; MPEP 2143.03; In re Rouffet*, 149 F.3d 1350, 1355-56 (Fed. Cir. 1998).

Claims 67, 85, 101, and 110

Independent claims 67, 85, 101, and 110, as amended, each contain limitations of substantially the following form:

for each of a plurality of media access control (MAC) devices to which data is to be transmitted over a ring topology network, providing a corresponding queue wherein each corresponding queue is configured to transmit data in a first egress direction and a second egress direction over the ring topology network;

receiving data, from a local client, destined for a client of a first MAC device of the plurality of MAC devices;

storing at least a portion of the data in a first queue corresponding to the first MAC device;

receiving information generated by the client of the first MAC device indicating a need to change an amount of data being transmitted to the client of the first MAC device; and

selectively transmitting data stored in the first queue to the first MAC device, wherein

a rate at which the selectively transmitting is performed is based at least in part on at least a portion of the information indicating the need to change the amount of data being transmitted to the client of the first MAC device, and

the selectively transmitting further comprises transmitting data stored in the first queue in a selected one of the first egress direction and the second egress direction.

See, e.g., claim 67 (amended). Applicants respectfully submit that the cited sections of Enomoto and Blackard, taken alone or in combination, fail to disclose each limitation of claim 67. Specifically, Applicants respectfully submit that the proposed combination fails to disclose, at least, “each corresponding queue is configured to transmit data in a first egress direction and a second egress direction over the ring topology network.”

The Advisory Action mailed January 2, 2009 (“AA”) states that “the examiner has interpreted the claim to read that there is a queue corresponding to each egress direction, not one queue for both.” AA, p. 2. Applicants have amended claim 67 to clarify that each queue is configured to transmit data in both directions. Applicants respectfully

submit that the claim language, as amended, does not support the interpretation set forth in the AA or the Final Office Action.

Furthermore, Applicants respectfully submit that the cited portions of Enomoto and Blackard, taken alone or together, fail to disclose that “each corresponding queue is configured to transmit data in a first egress direction and a second egress direction over the ring topology network.” The Office Action mailed October 20, 2008 (“Office Action”) cites the following passages of Enomoto as purportedly disclosing providing a corresponding queue configured to transmit data in a first egress direction and a second egress direction:

[0170] Responsive to a request from the congestion notification reception transfer part A134 via the third notifying line M103, the flow number measuring part 351-3 notifies the congestion notification reception transfer part A134 via the third notifying line M103 of the number of available transmission queues and the number of flows passing through each transmission queue.

[0171] The transmission queue part 352 comprises the transmission queues prepared for respective destination congestion control nodes. The transmission queue part 352 has a function for storing the input frames classified by the input classification part 351 for the respective destination congestion control nodes until a request from the output adjusting part 353.

[0198] The transmission queue part 357 comprises the queues each destination client ID, each destination group ID, a node group ID, an IP address, an IP port number, or the like. The transmission queue part 357 has a function for storing the input frames classified each destination client from the input classification part 356 until a request from the output adjusting part 353.

Enomoto, ¶¶ 170, 171, and 198 (cited at Office Action, p. 3). By citing the above paragraphs as purportedly disclosing “a corresponding queue configured to transmit data in a first egress direction and a second egress direction over the ring topology network,” the Office Action suggests a correspondence between the claimed queue and Enomoto’s transmission queue parts. Applicants respectfully submit that Enomoto’s transmission queue part is not comparable to the claimed queue. Enomoto’s transmission queue part is a part of the transmission buffer part A135 (*see* Enomoto, Figs. 3 and 4). The transmission buffer part A135 is part the congestion control part A13 (*see* Enomoto, Figs.

2 and 3). Enomoto's Figure 2 clearly shows that there are two congestion control parts (A13 and A14), one for each direction on the ring network. Thus, the buffer (transmission queue part) which resides in congestion control part A13 cannot transmit data in a first and second egress direction over the ring topology network, as claimed. The buffer (transmission queue part 352) in A13 can only transmit in a single egress direction, *i.e.* from L101 to L102 (clockwise in Enomoto's Figure 1). Similarly, a buffer (transmission queue part 352) in A14 can only transmit in a single egress direction, *i.e.* from L103 to L104 (counter-clockwise in Enomoto's Figure 1). Accordingly, the cited passages of Enomoto fail to disclose the claimed queue configured to transmit data in a first and second egress direction.

Further, the Office Action admits that Enomoto fails to disclose that a client generates information indicating a need to change the amount of data being transmitted to the client, as recited in claim 67. Office Action, p. 4. The Office Action cites the Abstract of Blackard as purportedly supplying this missing disclosure. *Id.* Applicants respectfully submit that the cited portions of Blackard fail to do so. Blackard's Abstract recites:

A data processing system and a method implement a unique push, or streaming, model for communicating time sensitive encoded data, such as video and audio data, in a communication network. A pacing mechanism is implemented in the data processing system to allow a client to pace a streaming server in a stable way such that a fill level of a client buffer will oscillate around a single threshold value. A simple protocol is implemented to protect pacing primitives, allow recovery for pacing primitives, and to keep a client and a server synchronized during the pacing operation. To implement the pacing mechanism, the streaming server transmits data at a slightly faster rate than it was encoded. Subsequently, a decoder circuit at the client, or receiver, uses the transmitted data at the encoded rate. Thus, the utilization of buffers in the client will gradually increase. When the utilization of buffers reaches a threshold level, the client provides a pacing message to the server. When the pacing message is received, the server withholds sending data for a period of time sufficient to drop the client buffer utilization to a level below a threshold level.

Blackard, Abstract (cited at Office Action, p. 4). The AA states that "Blackard provides a teaching that allows the client to indicate the pace of transmission." AA, p. 2. As an initial matter, Applicants respectfully point out that Blackard fails to disclose that the

client is a client of a MAC device. Instead, Blackard merely discloses a receiver of audio or video data and calls this receiver a client. *See, e.g.*, Blackard 4:42-51.

Second, Blackard purportedly operates by a client sending a pacing message to a server and then the server modifying the server's transfer rate. *See, e.g.*, Blackard, Abstract. But the present claims provide for receiving information indicating a need to change an amount of data being transmitted to a client of a first MAC device generated by the client of the first MAC device. The information, after being generated by the client of the first MAC device is sent to the first MAC device. *See, e.g.*, Specification ¶ 15 ("the MAC client includes buffer control circuitry configured to provide information about an amount of data stored in the buffer," and "a message for transmission on the network including an indication to change a rate."). The information is then sent from the first MAC device onto the ring, and then the information is received by a node performing the claimed method. *Id.* Then, in response to that information, the node performing the method (not the first MAC) alters the rate at which data is transmitted to the first MAC device. Thus, the claim recites a client sending information to a first device which affects the rate at which another device transmits to the first device. The cited portions of Blackard fail to disclose comparable teachings. Enomoto is not cited as teaching receiving client generated information which has been relayed thusly, nor does Enomoto do so.

In fact, the cited sections of Enomoto teach away from using information from a client to form a message indicating a need to reduce the amount of data transmitted to the client. Enomoto explicitly recites that "detection of the congestion occurrence is carried out in the transit buffer and detection of the congestion occurrence is not carried out in the transmission buffer." Enomoto, ¶ 237. (emphasis supplied) Thus, congestion is not detected based on information from a client, or even information related to a specific client. Instead, congestion is detected based on the amount of data stored in a transit buffer, that data being transferred between stations, and not the amount of traffic transferred to a particular client.

Furthermore, Applicants respectfully submit that Blackard is not analogous art to Enomoto. Blackard is not directed to systems utilizing MAC devices or ring networks.

Applicants respectfully submit that even if one did attempt to combine the Enomoto and Blackard, the resulting combination would fail to disclose a MAC device that receives information from a client, generates a message including that information, and transmits the message to another MAC device.

Claim 68

Applicants respectfully submit that the cited portions of Enomoto and Blackard, taken alone or together, fail to disclose each limitation of claim 68, which recites:

The method of claim 67 further comprising:
providing a second queue corresponding to the first MAC device to which data is to be transmitted over the network;
storing at least another portion of the data destined for a client of the first MAC device in the second queue; and
selectively transmitting data stored in the second queue to the first MAC device;
wherein a rate at which the selectively transmitting of data stored in the second queue is performed is based at least in part on one of:
the at least a portion of the information indicating the need to change the amount of data being transmitted to the client of the first MAC device; and
at least another portion of the information indicating the need to change the amount of data being transmitted to the client of the first MAC device.

Specifically, Applicants respectfully submit that the cited portions of Enomoto and Blackard fail to disclose, at least, "a second queue corresponding to the first MAC device." (emphasis supplied)

The Office Action cites Enomoto Figure 6, element 357 and the following passage as purportedly disclosing these features:

The transmission queue part 355 comprises two queues, namely, the transfer amount restriction candidate queue and the transfer amount restriction non-candidate queue. The transmission queue part 355 has a function for storing the input frames classified to the restriction candidate and the restriction non-candidate from the input classification part 354 until a request from the output adjusting part 353 .

Enomoto, ¶ 187 (cited at Office Action, p. 6). Applicants note that transmission queue part 355 (shown in Figure 5) and transmission queue part 357 (shown in Figure 6) are from different embodiments. That is, the description cited above does not relate to Figure 6. Figure 6 does not disclose two transmission queue parts, wherein one is for restriction candidate and one is for non-restriction candidate frames.

Furthermore, unlike the claimed queue, the two transmission queue parts described as part of transmission queue part 355 are not disclosed as corresponding to a MAC device. Therefore, Applicants respectfully submit that the cited portions of Enomoto fail to disclose “a second queue corresponding to the first MAC device.”

For at least the foregoing reasons, Applicants respectfully submit that neither Enomoto nor Blackard, alone or in combination, provide disclosure of all the limitations of claims 67, 85, 101, and 110 (and all claims depending therefrom) and that these claims are in condition for allowance. Applicants respectfully request the Examiner’s reconsideration and withdrawal of the rejections to these claims and an indication of the allowability of same.

Claims 81-82, 86, 91 and 124-125

Claims 81-82, 86, 91 and 124-125 stand rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Enomoto in view of Blackard, and in further view of U.S. Publication No. 2003/0163593 listing Knightly et al. as inventors (“Knightly”). Applicants respectfully traverse these rejections. Applicants respectfully submit that these claims are allowable, at least by virtue of depending from allowable base claims. For at least the reasons presented above, Applicants respectfully request the Examiner’s reconsideration and withdrawal of the rejections to these claims and an indication of the allowability of same.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5092.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicants hereby petition for such extensions. Applicants also hereby authorize that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to deposit account 502306.

Respectfully submitted,



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